ACTION MEMORANDUM FOR EMERGENCY REMOVAL OF LEAD-CONTAMINATED SOIL AT 530 AND 550 CORPUS CHRISTI ROAD
ALAMEDA POINT
ALAMEDA, CALIFORNIA

Environmental Remedial Action
Contract Number N62474-98-D-2076
Contract Task Order 0037

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Environmental Division
1220 Pacific Highway
San Diego, California 92132-5190

Submitted by:

IT Corporation
4005 Port Chicago Highway
Concord, California 94520-1120

IT CORPORATION
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Michelle Crook, 02R1.MC
1230 Columbia St., Suite 1100
San Diego, CA 92101

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FROM: Dan D W. Baden
for John McMillan
Project Manager

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Other

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Saul Bloom, ARC Ecology (1C/1E)
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Anna-Marie Cook, US Environmental Protection Agency (1C/1E)
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Daniel Murphy, California Department of Toxic Substances Control (1C/1E)
Ted Splitter, Northgate Environmental Management (1C/1E)
Michael John Torrey, RAB (1C/1E)

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Acronyms and Abbreviations

ARAR	Applicable or Relevant and Appropriate Requirement
BCT	BRAC Cleanup Team
BRAC	Base Realignment and Closure
Ca-HSC	California Health and Safety Code
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
ER	Emergency Removal
FFA	Federal Facilities Agreement
ft^2	square feet
mg/kg	milligram(s) per kilogram
Navy	U.S. Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
Site	530 and 550 Corpus Christi Road

1.0 Purpose

The purpose of this Action Memorandum is to document, for the Administrative Record (Appendix A), the U.S. Department of the Navy's (Navy's) decision to undertake an Emergency Removal (ER) action to reduce risk from lead-contaminated soil at 530 and 550 Corpus Christi Road (Site). The Navy took this action pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response actions, including removal actions, under 42 U.S.C. Chapter 9604, 10 U.S.C. Chapter 2705, and Federal Executive Order 12580. Furthermore, this removal action is consistent, to the maximum extent possible, with Chapter 6.8 of the California Health and Safety Code (Ca-HSC, 2001). This removal action was initiated on October 13, 2001.

During the ER action, approximately 6,200 square feet (ft^2) of sod was placed over lead-contaminated surface soil and three concrete footings removed. This action will reduce the identified pathways of exposure to lead for human receptors. This ER is an interim action taken during the investigation and will require a subsequent investigation and/or response. An Engineering Evaluation/Cost Analysis (EE/CA) is currently being prepared for the Site and is expected to be published on December 21, 2001. Extensive removal actions are anticipated to be recommended in the EE/CA.

The ER action for this site is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations (CFR) Part 300 and Chapter 6.8, Ca-HSC (Ca-HSC, 2001), based on the findings of levels of contaminants in soils at or near the surface that may migrate and provide actual or potential exposure to nearby human populations.

2.0 Site Conditions and Background

This section describes the site location, site characteristics, releases or threatened releases of a hazardous substance or contaminant into the environment, the site's National Priorities List (NPL) status, other actions taken at the site to date, and the role of state and local authorities at the site.

2.1 Removal Site Evaluation

A metallic antenna tower (Tower No. 36B) was previously situated behind 530 Corpus Christi Road at Alameda Point (formerly Alameda Naval Air Station). Historically, this tower was painted with lead-based paint. Years of exposure, active stripping and repainting, in addition to the dismantling of the tower, resulted in lead contamination of the surface soil. The tower was removed in December 1995.

The lead contamination was identified during sampling at the Site conducted to assist with the EE/CA, which will be released December 21, 2001. Elevated lead levels were identified in the backyard of two residences that were known to house children. The range of surface soil analytical results within the site is 117 milligrams per kilogram (mg/kg) to 2,320 mg/kg.

The grass on the site was in poor condition and there was a large amount of exposed soil in the yard prior to the ER. The children in residence at the homes were exposed to the lead-contaminated soil.

Considering the presence of lead-contaminated soil in and around the antenna tower and adjacent residences, the disrepair of the grass cover in these areas, and the potential for exposure to children residing in the housing units, the Navy decided, with regulatory concurrence, to conduct an ER action at this location. This interim action at the Site consisted of covering the affected area with sod and removing the concrete footers.

The ER action was conducted in two phases. During the first phase the three concrete footings of the tower were still present and the sod was placed around them. A second phase took place after the concrete footers were identified as having potentially been painted with lead-based paint. The concrete footings were removed to approximately 18 inches below grade, filled with clean soil, and new sod was added to match the surrounding area. A small section of the sidewalk was also replaced, as one footing removed was located within the sidewalk.

2.2 Physical Location

This site is located at Alameda Point (formerly Alameda Naval Air Station), in Alameda County, California (Figure 1). The physical addresses for the properties where the ER action took place are 530 and 550 Corpus Christi Road. The backyards of these properties border West Midway Road (Figure 2). The sod was placed in the backyards of these properties from the residence structures to the sidewalk.

2.3 Site Characteristics

The site is owned by the Navy and leased to the City of Alameda and is located in a residential area. The Site that the ER action was conducted at is located beneath and adjacent to a former antenna tower. Children are known to live in or near the property. The ER action was conducted taken to immediately reduce the potential exposure to the children in residence.

2.4 Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant, or Contaminant

The metallic antenna towers were exposed to years of exposure to heat, cold, salt air, wind and rain. The towers rusted and were regularly stripped and repainted to prolong their lives. The rust, weather and maintenance activities over the years at the towers deposited lead from the paint into the surrounding soil.

The condition and location of the property, as well as the inhabitants of the residences indicated that children could be potentially exposed to lead in the soil. Potential exposure pathways to the lead include direct ingestion, inhalation, and dermal contact. The property is on a corner lot and the backyard is adjacent to the sidewalk, this location provides easy access to the exposed soil.

It is anticipated that approximately 6,200 ft^2 of lead-contaminated soil are present on the property. The poor condition of the grass cover allowed a threat of migration of the contaminated soil, from wind and/or rain. The addition of the sod to the property decreased the potential exposure to the soil.

2.5 National Priorities List

Alameda Point was added to the NPL on July 22, 1999. The listing was the result of a hazard ranking system evaluation performed by the U.S. Environmental Protection Agency (EPA).

2.6 Status Maps, Pictures, and Other Graphic Representations

The location of the properties affected by the ER action and the area where the sod was placed are presented on Figures 1 and 2.

2.7 Other Actions to Date

An Environmental Baseline Survey provided the preliminary assessment of the Site and was previously conducted; however, no samples were specifically collected from the area associated with the antenna tower and adjacent housing units. Currently, an EE/CA is being prepared and will be published December 21, 2001. The EE/CA will assess additional removal alternatives at the Site.

2.8 State and Local Authorities' Roles

Alameda Point is part of a federal facility. Section 120(f) of CERCLA requires that the Navy give appropriate state and local officials the opportunity to participate in planning and selection of remedial actions at Navy facilities. The Navy and EPA have entered into a Federal Facilities Agreement (FFA) that designates EPA as the lead regulatory agency for Alameda Point. The EPA is the federal regulatory agency for CERCLA activities at NPL sites (e.g., Alameda Point) and is reviewing and commenting on the Navy's CERCLA response activities at Alameda Point. During a base realignment and closure (BRAC) cleanup team (BCT) meeting, the Navy discussed the conditions of the ER with EPA, California Department of Toxic Substances Control, and the City of Alameda and received verbal concurrence for this removal action from these agencies.

3.0 Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities

Based upon the elevated concentrations of lead in the soil and the residential use of this property, the Navy determined that this area posed an immediate and imminent threat to public health and welfare and the environment and that an emergency removal action pursuant to CERCLA Section 104(a) was appropriate to mitigate this threat. The following imminent threat to public health and welfare, as defined in NCP Sections 300.415(b)(2)i (CFR, 2001), are present at the Site:

- **Actual or potential exposure of nearby human populations to hazardous substances, pollutants, or contaminants.**
  - At Alameda Point, people residing, working, or playing at the site may be exposed to soil contaminated with lead through direct contact or incidental ingestion. Lead is a hazardous substance known to pose a threat to human health.
- **High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.**
  - Exposed surface soil at the Site that is contaminated with lead can potentially migrate with human contact and dispersion and weather conditions as described below.
- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.**
  - Wind and rain at Alameda Point can cause the migration of the lead-contaminated surface soil at this site.

3.1 Threats to Public Health and Welfare

Lead exposure can cause effects in almost every organ and system in the human body, and children are more vulnerable to lead poisoning than adults. Small children can be exposed by eating lead-based paint chips, chewing on objects painted with lead-based paint, or swallowing house dust or soil that contains lead. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. A large amount of lead might get into a child's body if the child ate small pieces of old paint that contained large amounts of lead. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth (Agency for Toxic Substances and Disease Registry, 2001).

3.2 Threats to the Environment

There has been no assessment of ecological threats for this ER action. Efforts to assess the ecological risks will be part of the ongoing removal action process and will be discussed in the EE/CA that will be distributed on December 21, 2001.

4.0 Endangerment Determination

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, presented an imminent and substantial endangerment to public health, or welfare, or the environment.

Human exposure to lead through direct contact with or incidental ingestion of contaminated soil posed a potential threat to public health and welfare if the removal action described in this document had not been implemented.

5.0 Emergency Removal Action and Estimated Costs

This section describes the removal action for contaminated soil at the Site. It also discusses applicable or relevant and appropriate requirements (ARARs) and the estimated cost of the removal action.

5.1 Emergency Removal Action Description

The ER took place on Saturday, October 13, 2001 and November 16, 2001. This response consisted of preparing the ground for sod and placing sod on the property as indicated on Figure 2. The sod was placed against the house and down to the sidewalk, covering the affected soil. Approximately one month later, the concrete footings from the antenna tower were removed and filled with soil, and then the sod was placed to match the surrounding area.

5.2 Contribution to Remedial Performance

This ER will allow the contaminated soil to remain in place until further removal activities are conducted. This activity will reduce the risk of exposure and decrease the possibility of migration of the soil by weather activities or human contact.

5.3 Description of Alternative Technologies

Alternatives to sod application and removal of the concrete footers were not explored due to the emergency nature of this removal action. The description of alternative technologies for the extensive removal action of this property will be discussed in the EE/CA that will be released December 21, 2001.

5.4 Engineering Evaluation/Cost Analysis

An EE/CA was not conducted due to the emergency nature of this removal action (40 CFR, 300.415[b][4] [CFR, 2001]). An EE/CA is currently being conducted that will address follow up removal activities for this Site. The estimated cost of the emergency removal action is discussed in Section 5.7.

5.5 Applicable or Relevant and Appropriate Requirements

The purpose of conducting the removal action is to reduce risks to human health by eliminating contact with lead-contaminated surface soil and concrete footings from the backyard of two homes on the Site. The placement of sod over the contaminated surface soil and removal of the concrete footings decreased the potential exposure pathways to the lead.

CERCLA requires consideration of ARARs for removal actions at a site. Applicable requirements are promulgated federal or state standards that specifically address a hazardous constituent, removal action, location, or other conditions at a site. Relevant and appropriate requirements are promulgated federal or state requirements that address problems or situations sufficiently similar to those encountered at a hazardous waste site; these requirements may or may not be directly related to the circumstances at a CERCLA site. ARARs attained for the Site soil ER are summarized in Table 1.

5.6 Project Schedule

The ER took place in two phases. The first phase took place and was completed on Saturday October 13, 2001 in which the majority of the sod was placed. The second phase took place and was completed on November 16, 2001 in which the three concrete footings were removed and sod was placed over the area of the former footings.

This ER was only an interim action. An EE/CA is currently being written to address removal alternatives at the site, the planned distribution date of this document is December 21, 2001. An extensive removal action will be taken based on the EE/CA and an Action Memorandum will be prepared following the remediation.

5.7 Estimated Cost

The cost of the ER action was approximately $14,500, which includes placement of the sod, removal of the concrete footings and associated documentation. A breakdown of the costs is as follows:

Engineering and Design	$ 4,000
Demolition, Excavation, and Loading	10,000
Reporting	500
	$ 14,500

6.0 Expected Changes in the Situation Had the Action Been Delayed or Not Taken

If the action had been delayed or not taken, exposure of human populations (especially children) to lead would continue from exposure to the affected soil. Contamination could spread from the affected area to other areas within the housing area via wind erosion of the soil, human contact and dispersion, or migration along the surface via runoff during seasonal rainy periods. This potential spread of contamination would result in an increased health risk to the exposed population. Delayed action would also have increased public health risks to the adjacent population through prolonged exposure to contaminants.

If the action had been delayed or not taken, contamination would have been allowed to continue to migrate, thereby, potentially resulting in a greater volume of material to be remediated. This may have resulted in an increase in treatment and/or disposal costs.

7.0 Public Involvement

A description of the emergency removal action was presented to the Alameda Point Restoration Advisory Board on November 6, 2001. The Navy will circulate the Action Memorandum and Administrative Record for public comment within 60 days following initiation of site activities.

8.0 Outstanding Policy Issues

No outstanding policy issues are associated with this Site.

9.0 Recommendation

To date, the Navy has not acquired evidence identifying other potentially responsible parties at this site. However, information acquired in the future, including, but not limited to, information acquired during the implementation of this removal action or future response actions at the site, could result in the identification of other potentially responsible parties.

The Action Memorandum was performed in accordance with current EPA and U.S. Navy guidance documents for ER actions under CERCLA. The purpose of this Action Memorandum is to document and analyze the ER action addressing lead-impacted soil at 530 and 550 Corpus Christie Road, Alameda Point. The removal action chosen was the quickest and most efficient to immediately reduce the risk of exposure to the lead-contaminated soil.

This decision document represents the selected removal action for the Site at Alameda Point in Alameda, California, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP.

Date 12/11/01

Michael E. McClelland, P.E.
Base Realignment and Closure Environmental Coordinator
Southwest Division Naval Facilities Engineering Command

10.0 References

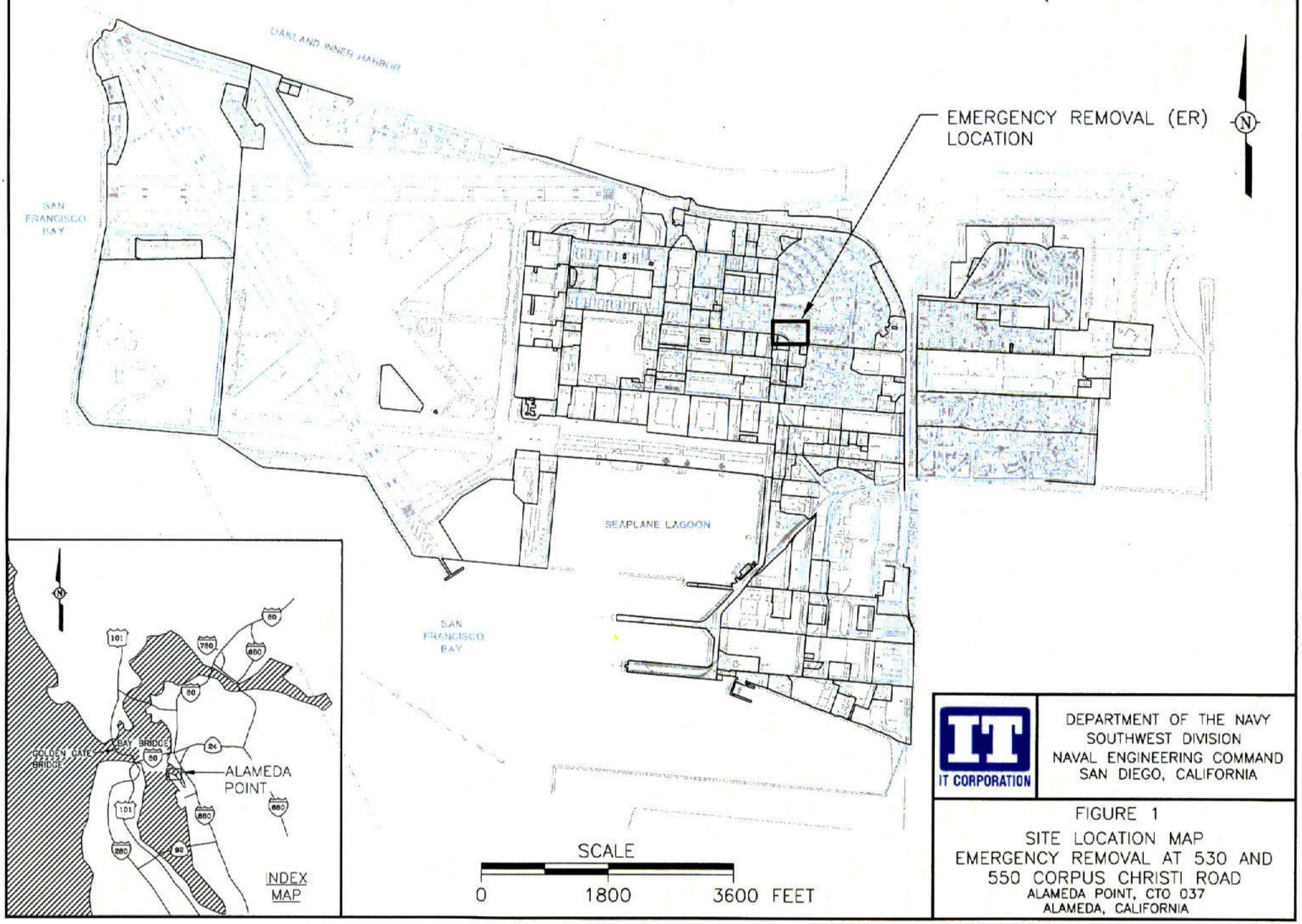
Agency for Toxic Substances and Disease Information Center, ATSDRIC@cdc.gov , 1-888-422-8737, this page last updated on June 11, 2001.

California Health and Safety Code, State of California, http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc, accessed November 2001.

Code of Federal Regulations (CFR), 2001, *National Oil and Hazardous Substances Pollution Contingency Plan, Title 40, Part 300*, August 20.

FIGURES

IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
---	AL99BASE	CONC	RB	12-11-01		12/10/01		12/10/01	823334-A9



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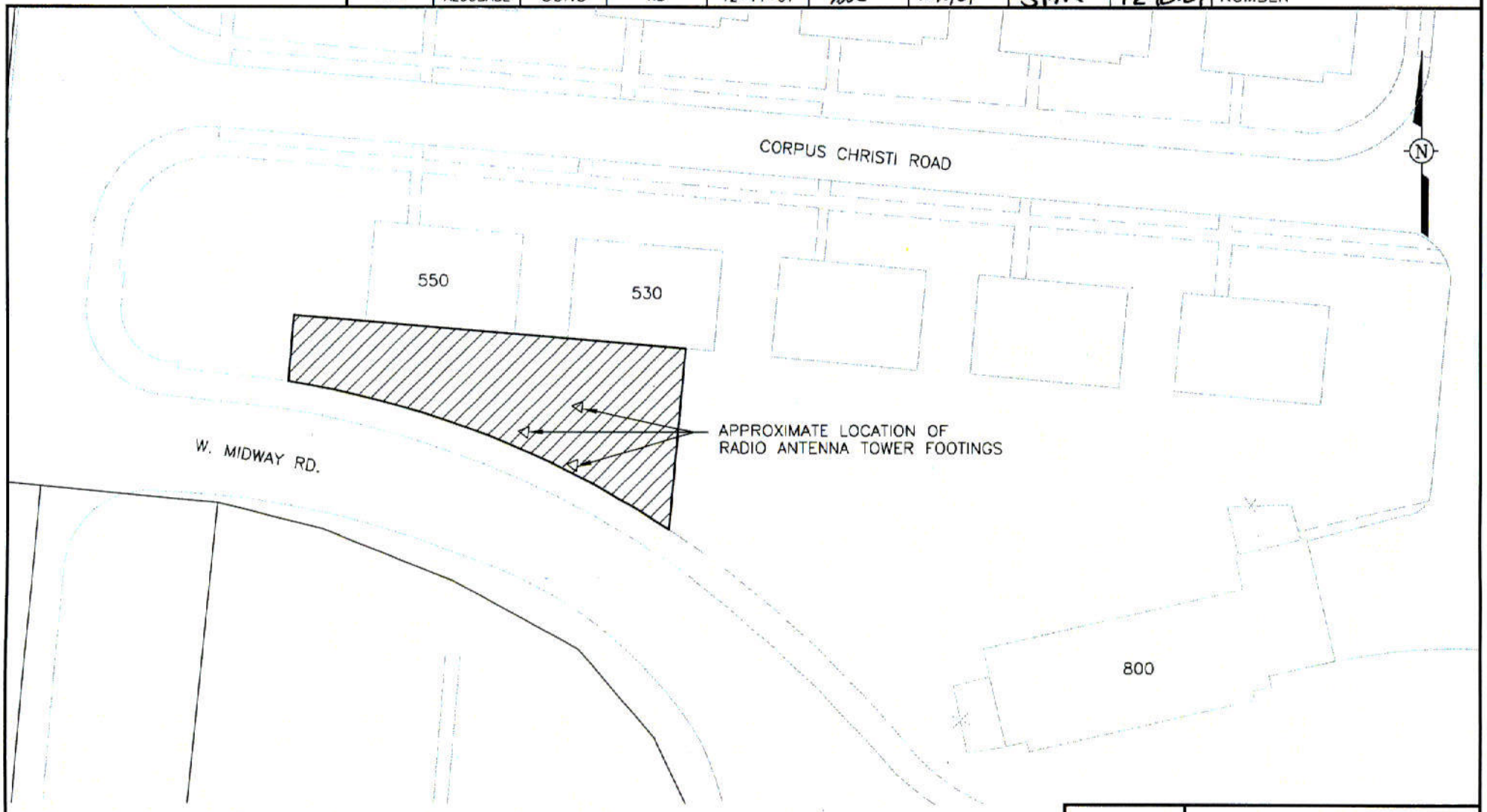
DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
NAVAL ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA

FIGURE 1
SITE LOCATION MAP
EMERGENCY REMOVAL AT 530 AND 550 CORPUS CHRISTI ROAD
ALAMEDA POINT, CTO 037
ALAMEDA, CALIFORNIA

IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
---	AL99BASE	CONC	RB	12-11-01	[illegible]	12/10/01	JPM	12-10-01	823334-A10



LEGEND:

EMERGENCY REMOVAL PLACED SOD

SCALE

0 50 100 FEET

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NAVAL ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA

FIGURE 2
SITE MAP
EMERGENCY REMOVAL AT 530 AND 550 CORPUS CHRISTI ROAD
ALAMEDA POINT, CTO 037
ALAMEDA, CALIFORNIA

TABLES

Table 1
Applicable or Relevant and Appropriate Requirements for Emergency Removal at 530 and 550 Corpus Christi Road

Citation	ARAR Classification	Description	Comments
BAAQMD Regulation 6-301, 302, and 305	Applicable	Sets requirements for controlling particulate and visible emissions during excavation and transport.	These requirements may be applicable to handling of soils and removal of construction debris.
Residential Lead-Based Paint Hazard Reduction Act (Title 10 of Housing and Community Act of 1992) 42 USC Chapter 4822	Relevant and Appropriate	Established for the protection of children from exposure to lead, specifically in lead-based paint.	These requirements may be applicable to the removal of construction debris at the site.

APPENDIX A
ADMINISTRATIVE RECORD INDEX

ALAMEDA POINT NAS

DRAFT ADMINISTRATIVE RECORD FILE INDEX - UPDATE (SORTED BY RECORD DATE/RECORD NUMBER)

DOCUMENTS RELATED TO ENVIRONMENTAL BASELINE SURVEYS (EBS)

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
N00236 / 001054 LTR NONE 0000	11-24-1999 **05-11-1994** NONE 00.0	ERM WEST	SUBMISSION OF ENVIRONMENTAL BASELINE SURVEY (EBS) AND COMMUNITY ENVIRONMENTAL RESPONSE FACILITATION ACT (CERFA) REPORT	INFO REPOSITORY	CERFA EBS		IRON MOUNTAIN 45359734
N00236 / 001639 RESP NONE 0010	11-24-1999 **11-19-1998** NONE 00.0	NAVY YIP, WARREN DTSC CASSA, MARY ROSE	RESPONSE TO COMMENTS ON PARCEL RECLASSIFICATION FOR ENVIRONMENTAL BASELINE SURVEY (EBS)	ADMIN RECORD			IRON MOUNTAIN 45359750
N00236 / 000210 NONE PLAN N62474-93-D-2151 0040	08-09-2001 **12-21-1998** DO110	IT CORPORATION T. DAVIS NAVFAC - WESTERN DIVISION	CONTRACTOR QUALITY CONTROL PLAN, ZONE 24 - PARCEL 215 EVALUATION, AND ENVIRONMENTAL BASELINE SURVEY (EBS) PHASE 2C, TODD SHIPYARD, REVISION 0 {SEE AR #220 - REVISION 1}	ADMIN RECORD	EBS	PARCEL 215	SOUTHWEST DIVISION

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
N00236 / 000120 1592.0 & 1592.1 RPT 80462393, RPT N62474-98-D-2076 8000	06-28-2001 **01-01-2001** 00022 00022	IT CORPORATION NAVFAC - NAVFAC - SOUTHWEST DIVISION	FINAL - ENVIRONMENTAL BASELINE SURVEY (EBS) - (16 VOLUMES) - INCLUDES ELECTRONIC VERSION {SEE AR #158 - GUIDE TO FINAL EBS}	ADMIN RECORD INFO REPOSITORY REPOSITORY	PAH PCB SVOC SWMU TPH USE UXO VOC	ZONE 1 ZONE 10 ZONE 11 ZONE 11 ZONE 12 ZONE 13 ZONE 14 ZONE 15 ZONE 16 ZONE 17 ZONE 18 ZONE 19 ZONE 2 ZONE 20 ZONE 21 ZONE 22 ZONE 23 ZONE 24 ZONE 3 ZONE 4 ZONE 5 ZONE 6 ZONE 7 ZONE 8 ZONE 9	IRON MOUNTAIN 80462391, 80462392, 80462392, 80462393, 80462394, 80462395

UIC No. / Rec. No. Doc. Control No. Record Type Contr./Guid. No. Approx. # Pages	Prc. Date Record Date CTO No. EPA Cat. #	Author Affil. Author Recipient Affil. Recipient	Subject	Classification	Keywords	Sites	Location Box No.
N00236 / 000158 1592.2 RPT RPT N62474-98-D-2076 0500	07-03-2001 **06-29-2001** 00022 00022	IT CORPORATION D. SHAFER NAVFAC - NAVFAC - SOUTHWEST DIVISION	FINAL COMPREHENSIVE GUIDE TO THE ENVIRONMENTAL BASELINE SURVEY (EBS), VOLUME 0, REVISION 0 {SEE AR #120 - FINAL EBS}	ADMIN RECORD INFO REPOSITORY REPOSITORY	EBS PAH PCB SVOC SWMU TPH USE UXO VOC	ZONE 1 ZONE 10 ZONE 11 ZONE 11 ZONE 12 ZONE 13 ZONE 14 ZONE 15 ZONE 16 ZONE 17 ZONE 18 ZONE 19 ZONE 2 ZONE 20 ZONE 21 ZONE 22 ZONE 23 ZONE 24 ZONE 3 ZONE 4 ZONE 5 ZONE 6 ZONE 7 ZONE 8 ZONE 9	IRON MOUNTAIN 80462397

((SUBJECT Like "*ebs*" Or SUBJECT Like "*environmental baseline survey*")) AND [UIC NUMBER]='N00236'